



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,959	12/03/2004	Tatsuo Shimizu	042-201	6172
35870	7590	10/18/2007		
APEX JURIS, PLLC TRACY M HEIMS LAKE CITY CENTER, SUITE 410 12360 LAKE CITY WAY NORTHEAST SEATTLE, WA 98125			EXAMINER WILLS, MONIQUE M	
			ART UNIT	PAPER NUMBER
			1795	
			MAIL DATE	DELIVERY MODE
			10/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/516,959

Applicant(s)

SHIMIZU ET AL.

Examiner

Monique M. Wills

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-10, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Office Action is responsive to the Amendment filed August 8, 2007.

The rejection of claims 5-10 & 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudo et al. U.S. Pub. 2002/017869 in view of Johnson et al. U.S. Pat. 7,049,031, is maintained. The claims are newly rejected under 112 first paragraph for failing to comply with the written requirement.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5-10 & 12-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not appear to provide for ball milling an active material "without forming carbon layers".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-10 & 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudo et al. U.S. Pub. 2002/017869 in view of Johnson et al. U.S. Pat. 7,049,031.

With respect to claims 5 & 9, Kudo teaches a lithium rechargeable battery (par. 29) comprising: a current collector (par. 35) and a conductor-mixed electrode active material, including a mixture of acetylene black conductive material obtained by a ball mill without a binder. See paragraphs 19 & 33. The electrode active material is coated on a current collector (par. 35). Further concerning claim 9, a binder is mixed with the active material to form the positive electrode structure (par. 35). With respect to claim 6, the conductive material is carbon (par. 15). With respect to claim 8, the binder embraces the

Art Unit: 1795

instant anchor material between the current collecting material and the electrode layer (par. 35).

Kudo does not expressly disclose: a lithium manganate active material (claims 6 & 10); a rough collector surface (claim 7); or conductive material bonded in flocculent form on the surface (claims 12 & 13).

Johnson teaches it is well known to employ lithium manganate as positive material for lithium secondary cells, because they do not contribute to the impedance rise of electrochemical cycled lithium -ion cells (col. 1, lines 50-60).

Kudo and Johnson are analogous art, because they are from the same field of endeavor namely, fabricating lithium secondary cells.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the instant was made to employ the lithium manganate of Johnson, in the lithium cell of Kudo, because the material does not contribute to the impedance rise of electrochemical cycled lithium -ion cells. Kudo suggest the use of lithium oxides (par. 14).

With respect to the rough collector surface, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ a rough surface on the electrode of Kudo, in order to increase conductivity of the current collector. The skilled artisan recognizes that

Art Unit: 1795

roughing the surface increases the surface area, therefore improving electrical conductivity.

With respect to the conductor material being bonded in flocculent form on the surface of the, it would be reasonable to expect the electrode material to take flocculent form, because the material is made by the same method set forth by applicant. Furthermore, the material composition is identical to applicant.

Response to Arguments

Applicant's arguments, with respect to the 103(a) rejection has been considered. However, the arguments are based on a new limitation which is not supported by the specification. The 103(a) rejection is maintained until the 112 first rejection is overcome.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply

Art Unit: 1795

is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Patrick Ryan, may be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


PATRICK JOE EFFRMAN
SUPERVISORY PATENT EXAMINER

MW

10/12/07